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ABSTRACT

The Champaign County (Ohio) Board of Education asked four companies to participate in a workplace literacy project: Hall Company, Grimes Aerospace, LewiSystems, and Comdyne. Companies supplied training facilities and paid release time for employee participants. Seventeen classes were completed; 13 were attended by recruited participants, 4 by volunteers. The grant director performed literacy task analyses (LTAs), recruited teachers, and assessed company readiness. Teacher training focused on metacognition, cooperative education, team processes, and evaluation tools. Company goals and expectations were explored, revised, and integrated with curriculum tools, such as individualized education plans (IEPs), portfolios, and workplace materials. Problem-solving committee meetings were scheduled monthly for curriculum review and class and company issue identification. As teachers became facilitators, LTAs evolved into the Job Skills Inventory, IEPs became Life Long Learning Logs, and basic skill was expanded to become a holistic, integrated curriculum based on discovery learning. The need for problem-solving committee meetings diminished, and supervisor workshops were phased in. Class participants showed improved test scores and reported higher levels of confidence in communications, better relationships with coworkers, and improved team operations. (Appendixes include director's comments and materials used in and information about teacher training and student assessment.) (YLB)

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CHAMPAIGN COUNTY
NATIONAL WORKPLACE LITERACY PROGRAM

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Abstract

With the help of a Federal Department of Education Workplace Literacy Grant, the Champaign County Board of Education has capitalized on their relationship with area businesses, the chamber of commerce and Urbana University. The board has formed a unique partnership with community business interests that supports competitive change.

As small, rural businesses struggle to keep up with new government regulations, stiff quality standards and demanding time schedules, workplace education has become more essential. Problem solving, organizational skills, communication and thinking strategies are important for employees from the executive office to the production line.

To prepare companies for the changing environment, the Workplace Training Team has combined neural cognitive brain research with educational requirements for business excellence. By incorporating experiential learning, cooperative education and learning style research into the adult classroom, participants experienced shortened learning curves, improved basic skills and problem solving skills, enriched communication and advanced thinking strategies.

The Background, Project, Process, Progress and Future of literacy grant training and research follows this introduction. Please contact the Champaign county Board of Education, 513-653-5296 for further information, curriculum/facilitator's hand book or training inquiries.

Introduction

Are We there Yet?

A *final* report? Wait! This project is not finished. We are still refining, reorganizing, re engineering and re negotiating. This will certainly not be the last you hear from us. This will not be our final work on the subject of workplace education and training.

Reporting on a project as *unfinished* as this one requires a disclaimer of sorts--and here it is:

> This final report is the deadline draft of an ongoing process. We reserve the right to continue to improve, improvise, invent and imagine new methods, processes and applications. In fact, by the time you are reading this report it will be outdated.

But, we should begin in the beginning. The beginning is the past, which is a stagnant thing, and retelling the past should be an easy and logical place to start. The problem is that each of us has a different story to tell, a different version of the beginning, the process that followed, and a set of important lessons learned along the way. We each have unique backgrounds, experiences and goals. For this reason, this report will consist of 3 important elements.

First, a "narration" of the Project, Process and Progress will be common throughout those 3 sections. It makes up the main body of the report and is the report of a workplace literacy grant which evolved into a project that changed peoples lives, a process of supporting change and a progress report used for comparison and improvement.

Second, the collected statistical data and relevant facts and figures will be offered as supporting information. You will find this data In "boxes" as you read, or skim, the report. This data will include demographics, testing results, independent evaluator reports and the like. It will be offered without a extensive explanations, verbiage, excuses, etc. The information should be easy to locate within the report

Third, individual accounts or stories of growth are entwined in the report. You will find these personal accounts in italics. They are woven through the body of the report, just as the experiences were woven through the project, process and progress of the grant.

Contributors to the grant project include:

- The Federal Department of Education which contributed $277,000.
- Johanna DeStephano, Associate Dean of Education at The Ohio State University who was grant consultant, confidant, confidence booster and team member.
- Caroline Costin, PhD at The Ohio State University, who was our independent evaluator and qualitative and quantitative feedback coordinator.
- George Y. Travis, Grant Director for 10 months.
- Hal Barker, Assistant Superintendent, Champaign County Board of Education, grant outside administrator, team member and counselor.
- Lestie Carey, Site Coordinator and then Grant Director, who was the impetus behind grant writing, teacher training, class content and grant direction.
- Mary Wurst, Facilitator.
- Elizabeth R. Spievak, Facilitator.
- Grimes Aerospace, The Hall Company, LewiSystems and Comdyne Inc.

Background

Champaign County is a rural community with 80 small manufacturing companies.

Champaign county covers 429 square miles, has a unemployment rate of 9.2%, a poverty level of 6.7% and a population comprised of 3.7% minorities, mainly African Americans.

The Champaign County Board of Education, was the sponsoring agent and home office for grant operations. The CCBOE is a rural district responsible for 4 school systems, an early childhood development center, testing and licensing for Commercial Drivers Licenses and Bus Driver Training.

There are 4 partner companies with work site classes in 6 locations. All participating companies experienced business downturns and layoffs during the first cycle of training.

The Ball's in Your Court.

Vital Statistics
County Population--36,646
Total Labor Force--19,700
Service Industry Jobs--14,734 (60%)
Manufacturing Jobs--3760

As Work-study Coordinator (and future grant coordinator) for the Champaign County Board of Ed., Lestie Carey was bombarded with suggestions, complaints and predictions for the future of education. While she was in local businesses Lestie couldn't help recognize that many businesses had similar interests and requests. The CCBOE saw an opportunity to get some free assistance and encourage formal business involvement in educational planning. The Business Advisory Council was born.

BAC Highlights:
5 years in existance
20 companies
6 school systems
Teachers participate in job shadowing
9th grade Career Day
BAC Foundation for teacher and student projects

They came, they saw, they shared

The BAC was a resounding success and out of it grew new relationships and understanding. An interesting thing happened when businesses began helping the educators--they began helping each other. Local companies shared expertise, information and resources. It was from the BAC experience that Lestie developed the plan to apply for a grant for a consortium of companies who would share trainers, planning and evaluation time, funding, accountability and would also share in the benefits. Bringing companies together for the BAC spurred ideas for the future and sharing training resources would only help small, rural companies keep up with international competition and technical requirements.

The Structure of the Grant provided for :

- teaching cycles of 60 hours of instruction
- Time between cycles for feedback and adjustments
- weeks of teacher training
- Start-up time for participant selection and for conducting LTA's
- Formation of a problem solving committee to include a representative from management and a class participant from each company
- Staff of 1.5 teachers, 1 coordinator and a director
- Identification of a company contact
- A record keeping system with the treasurer of the Champaign County Board of Ed.
- Grant goals including basic skill upgrades, SPC/TQM instruction and problem solving skills
- The implementation of class record and lesson plan systems

The cast of characters

Four companies were asked to participate in the grant. The Hall Company, Grimes Aerospace, LewiSystems and Comdyne agreed to supply training facilities and paid release time for employee participants. The companies share little in common aside from local operations and employee pool. They differ in philosophies, ownership, products, technology and plans for the future.

Major Industrial Employers:

Grimes Aerospace--1st

LewiSystems, Inc.--4th

The Hall Company--6th

Grimes Aerospace is a locally headquartered company that produces landing gear and lighting for airplanes. Military contracts have historically been a large proportion of sales and the family-style management was influenced by long-time employees with military backgrounds. Recently, however, Grimes Aerospace has been subjected to 3 leveraged buy outs, and the family is no longer involved. Constant reorganization, goal and mission amendments and turnover at the top are constant obstacles. Confusion over job roles, job security and job requirements are a part of everyday operations.

Training was done in 3 Grimes locations in Urbana with employees that had a variety of technical and managerial strengths, weaknesses and training needs. Grimes "Route 55" classes were comprised of a managerial group that interacts directly with customers and is responsible for pricing, contracts and development. The "Russell Street" location is a highly technical repair shop and "Twain Avenue" is primarily a production facility with quality control and scheduling functions.

A total of 17 classes were completed.

13 were attended by participants who were recruited.

4 were attended by participants who volunteered for classes

All employees were paid regular or overtime pay for class attendance.

The Hall Company is a family owned and operated company with all production and management facilities in Urbana. Their primary product is membrane switches for producers of equipment or consumer based products. The Hall Company has a small, labor intensive job-shop manufacturing process that caters to smaller runs, high quality and "unusual" requests or problem products. At the time the grant began, the company had instituted new production, quality and company-wide goals that included a new emphasis on tracking process and progress with quantitative measurements.

Core personnel at the Hall Company are long-time company employees and the environment is family oriented. Employees at all levels care for one another, compensate for each other's problems and inadequacies. A few employees have college degrees or are pursuing college education, most have high school education and some have no high school diploma. Most of the work force lives in Urbana. Charity is always an important theme and help is extended externally and internally. Food drives, production runs for non-profit organizations and payroll advances are not uncommon at The Hall company.

The Hall Company is the only partner that encouraged--required--all employees at all levels to participate in training. Managers, supervisors, directors, marketing specialists, accountants and production workers all went to class together. Participant diversity enhanced training results, in and outside the classroom. The Hall Company put classroom training to work immediately by reorganizing the shop floor into teams and increased accountability for productivity and quality by giving the teams quantitative feedback. Teams were also given the power to change processes and procedures and were rewarded for results.

Elizabeth

Comdyne, located north of Urbana in West Liberty, is a subsidiary of Johnson's Industries. Fiberglass wrapped tanks for oxygen and natural gases are Comdyne's primary products. The business is highly regulated by federal guidelines for safety and outside inspectors are on site at all times to approve the final product and testing procedures. Production methods are obsolete and labor intensive at Comdyne. The equipment is adjusted and fiberglass wraps are controlled through an intricate series of gears and chains with set-up drawings that exist mainly in the heads of employees.

Comdyne employees are as divided a group as I have ever seen. Communication from Johnson Industries, the parent company a few miles away, are woefully inadequate and the relationships within Comdyne are just as strained. Office and plant workers are separated by a few feet of space, and yet the space might as well be the grand canyon. It wasn't until the 2nd cycle of training that a floor supervisor stepped foot into a classroom and until the 3rd before a manager appeared.

Ironically, it was the company CEO that became the biggest convert. He learned job specific and life-changing thinking skills by participating in class. His middle managers dropped out, but he and his secretary stuck it out. With the help of plant employees, they developed a paper management system that made the most of his global skills and made adjustments for his inability to discriminate. His growth was a victory for company relations as well as operations. Elizabeth

Comdyne personnel is made up of ex-Westinghouse employees that are nearing retirement, very young high school graduates (or non-graduates) and an ever-rotating pool of temporary workers from a local agency. Pay is barely over minimum wage, benefits are hard to come by and the work environment is dark, dirty and hazardous. The chemical resins used to coat the fiberglass threads is a health risk and protection and disposal methods are non-existent. Injuries and allergic reactions are daily events.

LewiSystems is a very small division of Minasha. They have a resident, in-house trainer certified in a packaged training program. LewiSystems is a union shop with NC machines and dirty, oily floors. They run 24 hours, 362 days per year with rotating and swing shifts. Many employees at LewiSystems are high school drop outs. About 2/3 of the work force hold a high school degree and there are some college graduates in the ranks of management. The location does have an in-house trainer whose goals were sometimes seen to be in conflict with grant classes and curriculum.

Scheduling for classes at LewiSystems was very difficult and class members were never the same from class to class. Because of the swing and rotating shift schedule, employees would not necessarily work on the same days each week. The plant is unionized so overtime or time logged on days off was strictly regulated. As a result, classes were very small and participation was inconsistent. Very often, I would show up to find a class of only 1 or 2. There were some real "stars," however, perhaps due to individual attention and the dedication of students who made the extra effort to come to class. Mary

Project

Literacy grant Director, Consultant and Coordinator performed traditional literacy task analyses, recruited teachers and assessed company readiness.

Teacher training focused on metacognition, cooperative education, team processes and evaluation tools.

Company goals and expectations were explored, revised and integrated with curriculum tools such as IEP's, portfolio's and workplace materials.

Problem Solving Committee meetings were scheduled monthly for curriculum review and class and company issue identification.

It sounded easy enough

The grant project plan was for metacognition, learning to learn, and thinking about thinking to be a classroom method for basic skills and literacy lessons. Lestie Carey believed that her research and successful application of metacognition in the public school classroom could be transferred to the adult workplace classroom. She was convinced that adult learners had just as much to gain from learning style information. Soon we were all convinced that once employees were armed with knowledge about thinking processes, they could improve their basic skills and become life long learners.

Every time Mary and I were left alone during teacher training we would look at each other and whisper, "Do you know what we're doing?" Neither one of us had any idea what we were going to teach on a day-to-day basis. It appeared, however, that Lestie and Johanna had infinite confidence in us and we didn't want to disappoint them.

It turned out that every time Lestie and Johanna left the training room they were whispering to each other, "They're not ready. We should put off class start-up." They didn't want to let us know they were worried when we seemed so enthusiastic.

Elizabeth

Conveying her message and beliefs and translating them into lesson plans and objectives became a monumental task for teacher training. Three weeks were planned for training. One of the teachers had no classroom experience and the other had no business experience. Their backgrounds could not have been more different--and their thinking and learning styles were just as different. Metacognition and its effect on classroom methods proved to be a complicated process. One teacher was interested exclusively in thinking, the other entirely distracted by traditional adult education. "Teacher training" became very chaotic with starts and stops, interruptions and sideline discussions.

There was no lack of data available for teachers to study. Teachers were bombarded with paperwork and information. Training was a hodgepodge of function, format, IEP's and evaluations, procedures and project goals. Each day a new stack of reading material would appear in the teacher training room. It was impossible for Lestie to share 10 years of research and information in 3 weeks and it was impossible to meet the needs of 2 completely different teachers. There were more questions than answers.

In addition to information on learning styles, cooperative education and team teaching, teachers were expedited to become oriented with the various company sites and their individual needs. LTA's had been done by the grant director (at that time George Y. Travis--but that's another story), grant coordinator and grant consultant. Teachers were presented with LTA data, company information and sample shop papers that meant little to them.

One of the frustrations I had at the beginning was changing my focus from what to teach to how to teach. My teaching background was based on teaching a set of skills or from a textbook. Now I was asked to focus on process, ask open-ended questions, observe communication styles, be a fly on the wall watching team dynamics. I was so confused. My content had been my crutch--and now I had to rely on my observations, company needs and student feedback to form my curriculum.

Mary

During teacher training, Johanna and Lestie started handing out a library of articles on everything from literacy to corporate culture to metacognition. I said to myself--"aha""! Content for my class!" I dutifully read every article while Elizabeth let them cover the floor of her living room. After reading e, I became perplexed. These articles didn't help me fill in the "Stuff" of what I was going to teach; they were background information to give me a flavor of the kinds of issues I would encounter. I was responsible to "search " for the content somewhere in my students and the learning needs they encountered daily.

Mary

The amount of data available for the grant staff did little to solidify classroom training goals. The partner companies were little or no help in the area of objectives,. In fact, the companies only seemed to be annoyed by our questions about their expectations for the classes.

Classes did begin on time. Teachers began by giving the TALS tests, which were bemoaned by all. Class participants were asked to fill out surveys and questionnaires and then use these tools, along with TALS results to fill out IEP's concerning their basic skill goals. Primarily, student paper work was returned blank or with insufficient answers. It didn't take long for grant staff to deduce that the TALS, LTA's and traditional IEP's were not appropriate tools for assessment. It was clear to grant staff that students did need help and did have skill deficiencies.

One of my classes was made up almost entirely of college-level students with management responsibilities. Grimes had just placed them in "teams." Although TALS tests showed some language and math deficiencies, coping with reorganization, communicating with peers and learning to work in a team environment were issues far more immediate and important.

Planning the curriculum became a class effort. They chose a class project that was related to teaming issues. The project served as a basis for literacy lessons on problem and goal definition, organization skills, oral and written communication, and thinking. Elizabeth

A new day

Teachers surprised most students by emphasizing learning styles and metacognition. They worked to design activities and lessons to reveal thinking differences while practicing literacy. Students began to ask questions and take responsibility for their own learning. They even started to ask "literacy" questions, although the questions were not within the traditional education framework.

Instead of basic math, students asked for specific information on calculating quality tolerances, cost/benefit analysis of production changes, retirement benefits and insurance costs. Instead of reading and writing, participants wanted to discuss confusing language in employee handbooks and shop paper. They needed help communicating with coworkers and managers and understanding reports. These were complicated questions that reached far beyond test scores and GED's --they wanted to know how to deal with confusing company goals and economic pressures, how to balance work and family and how to suggest job changes.

Metacognition, discovery learning and cooperative education had been the my framework for teaching & training teachers for a number of years. Evaluation was based on testing for content knowledge and self-assessment regarding the process of learning and application of knowledge.

With the grant, I had visualized a better way to do workplace training by inserting components of my teaching methods into the new framework. When class participants resisted the more traditional approach to training, the Workplace Team began earnestly implementing the teaching methods and materials I had used in junior and senior high schools. Lestie

Quotes--Joe Pandin from Grimes Aerospace

"The differences [in people] cause stress. This is where this uncommon language comes in. and when you start tying the management people to the people on the floor, they're talking in two different complete languages. This miscommunication cost a lot of time and money, because people do not get what they really wanted. And it also causes misperceived attitudes between people. It's not that the person doesn't want to do it, its that they didn't even understand what you wanted or you didn't get what you said you wanted. Ant this is most important in this class and I think this class will help this immensely."

Local Education Options

Vocational Schools:

Joint Vocational School

Colleges within a 25 mile radius:

Whittenberg University
Central State University
Clark State Technical College
Wilberforce University
Edison State Community College
Antioch College
Wright State University

Dust to dust

Class participants were asking for very different curriculum than the one planned for the project. Basic skills seemed to be a matter of refreshers and practice, but were not of interest as a stand-alone topic. Participants asked for "analytical skill" practice for decision making and problem solving, and "communication" specific language skills for work and home. They were asking for skills related to the workplace, but not exclusive to it.

The teachers brought many, many questions to planning meetings with Lestie and Johanna, who responded by asking more questions. Class planning and goal setting became a creative group effort as the original curriculum disintegrated. Basic skills were woven through a worksheet specific curriculum that responded to student needs for life skills.

Been there, done that.

In lieu of the traditional advisory committee, the project called for monthly Problem Solving Meetings. It was to these problem solving meetings that partner companies came armed with complaints. At first, companies complained about what teachers were already trying to fix--the basic skills curriculum. Company representatives complained that students did not want to go to class or were bored in class. Since this was not news to the grant staff, companies were supplied with information about curriculum changes and invited to attend classes.

Not everyone was completely taken with the openness and trust required for the new curriculum. Participants had hidden their own inadequacies by distancing from others. When people started speaking their minds, some became angry and defensive. Sometimes I was the target for individual frustrations. Often, the rest of the class would use their skills to analyze outbursts so that even those negative reactions became positive learning experiences for everyone.

I realized that this kind of teaching cut to the bone--it was several layers deeper than anything I had done before. We were discussing real issues and making real changes in people's self-perceptions. I realized that even the most negative folks make significant progress, sometimes more than enthusiastic participants. Mary

The same--only different

Next, partner company representatives came to problem-solving meetings complaining that class participants were learning concepts they didn't know anything about or understand. Students were learning tools and strategies for thinking, problem-solving and communication and they wanted to learn those skills as well. Managers and supervisors wanted to know why grant money was being spent to teach plant floor workers to think. They assured us that they wanted to think too, but they didn't have time to go to classes. Companies demanded shortened, condensed and upscaled versions of the same curriculum--managers thought they could spare a couple of lunch hours or a few minutes after work for thinking skills.

I argued with the rest of the staff when we started producing special programs for managers and supervisors. I rebelled when they wanted me to spend my "free" time making middle management feel better when they refused to make time to come to class.

I felt that partner companies really needed management consulting, and that consulting was beyond the scope of the grant. While executives and managers could benefit from our training, I did not believe that they would be willing to do the follow-up work required to make a difference. Revised policies, processes and reward systems were contributions management could make to ensure skill transfer and application.

Elizabeth

We're dancing as fast as we can

Believe it or not, we did at first try to accommodate everyone. We held manager/supervisor luncheons and drew everyone from the executive office to the plant floor. We held 4pm mini-training sessions with sample class tools and group learning activities as well as question and answer periods. Once again, managers and supervisors were invited to observe classes or, preferably, participate in them.

The revolt continued. Executives were in favor of the theory, supervisors were not seeing their support in practice and students were wondering what all the fuss was about. After all, student participants asked--wasn't this Continuous Improvement/TQM thing what companies had been saying they wanted to accomplish? And wasn't that the heart of the classes? Grant staff could only shrug.

Quotes--Barb Philibert from LewiSystems

"We were really hoping that [employees] could learn to go into a situation and solve it for themselves, but when it came down to the wire, supervisors felt caught between production and sending people to class. It was rewarding when their people would tell them something about class and they could say, 'Yeah, I might've taken a bit of tongue lashing for letting you go to class, but it was worth it in the long run.'"

An itchy trigger finger

The real problem was that these companies were in turmoil. They had internal problems, were down-sizing, reorganizing, re-engineering and, well, blaming every one but themselves for their problems. The grant staff became a target for blame and persecution. We did the only thing we could. We dodged bullets until we could decide how to reorganize and re-engineer ourselves.

And now for something really wonderful

The resulting metamorphosis was a the Workplace Training Team. The grant staff applied their working knowledge of classroom management and process evaluation and turned it inward to change the way the project, class planning, curriculum and administration was handled. Continuous improvement was built into all work and the team openly announced that constructive assistance to improve training was welcome.

As a team we presented our product to an audience fully aware that they were expected to become a part of the continuous improvement process. We explained that criticism and complaints would not receive reflex responses, but that the critics and complainers were welcome to participate in planning activities, problem-solving meetings and even to bring pro-active solutions to the team. We made it clear, however, that contribution and commitment to the process were required.

Some students who realized their potential for learning and thinking left their jobs to take better paying, more challenging positions. Joe, a student from Grimes Aerospace, was more-or-less forced to leave the company when he began using his new communication skills to bring his work area together.

Joe's attempt to change the environment caused his supervisor a great deal of anxiety. When the group became a cohesive team, the supervisor felt threatened because he had retained power by dividing employees and sabotaging every attempt to team. Joe was quickly put on probation based on some minor infraction. He left at the first opportunity and Joe honed his skills at another company--one that was very impressed with his communication abilities.

Mary

Classes changed. Participants brought content and suggested material and topics for class discussion. They helped refine lessons by participating in the development, teaching each other, sharing methods and doing work outside of class. Teachers brought activities and students brought their own reasons for participating, learning and growing.

Process

- The use of cooperative education, class projects and metacognition allowed grant teachers to focus on becoming facilitators.

- LTA's evolved into the Job Skills Inventory, IEP's became Life Long Learning Logs, basic skill was expanded to become a holistic, integrated curriculum based on discovery learning.

- The need for problem solving committee meetings diminished and Foreman/Supervisor workshops were phased in. Foreman, supervisors and management personnel were exposed to class format and participated in planning activities to support grant class participants.

- Instead of relying on management assignments for class rosters, grant training staff made presentations to employees to recruit volunteer participants.

- Cognitive coaching techniques were used to evaluate teacher/facilitator process and progress.

A fresh start

With the first cycle of training under our belts and with a new focus on the process instead of the project directives, we were able to drastically improve our product. Teachers quickly became facilitators, tools were redesigned to support self-discovery and new evaluations were implemented.

We began the second training cycle by making presentations to employees about class content. During the first cycle we discovered that participants had been ill-informed about class content, duration, attendance requirements, etc. The first grant staff presentation prompted more than 200 people to volunteer for classes. Presentations were scheduled at the remaining 5 locations and produced positive results as well. The volunteer participants were by far the more highly motivated to attend and participate and were more successful in class.

During the first cycle of training one of my Grimes Aerospace classes had three strikes against it before it even met. They were told 2 hours in advance they had to attend class about learning how to read. Most of these folks were over 40 and could read quite nicely, thank-you. They thought the class was 1 1/2 hours long (it was 2 hrs). they did not know the classes were twice a week for 15 weeks until I mentioned it.

We struggled along for 4-5 weeks ironing out the misunderstandings and learned volumes about communication and trust. Although this was not my most successful class, we did overcome the obstacles the company put up. Mary

Who's on first

Teacher/facilitators learned that their work should be done almost entirely prior to class. Once in the classroom, teachers spent a few minutes on an introduction, setting-up materials and reviewing basic expectations and guidelines. The body of class time would be spent in student-directed activities. The facilitator would wrap things up by asking students to share their experience, what went well, what could have been done better and how their new skills could be applied to the work site.

Class projects were welcomed into the classroom and one of the most common topics for partner companies was cross-training. Lesson units were designed around thinking styles and how they related to communication and training others. Students participated in elaborate projects. They designed employee surveys and used results to plan company cross-training activities, brought current teaming issues to class, and participated in role play experiences.

The right tool for the job

Expanding class parameters required expanded curriculum and new tools for assessment and evaluation. The team scrapped the LTA for the Job Skills Inventory which takes stock of work tasks and the thinking and communication skills that are essential to a quality effort. We also chose a Lifelong Learning Log in lieu of an IEP. The log helped students keep track of their progress and make plans for the future by recording the thinking required for learning experiences and by planning strategies for successful learning. Standardized tests were supplemented with Learning Style Profiles and inventories of thinking. When TALS tests were returned to students the thinking required to understand questions and find the answer was the topic of discussion, not the answer itself. Strategies for skimming, scanning, decoding, calculating and guessing were discussed in terms of thinking strategies that could be developed within the group. Participants brainstormed methods and shared them with groups and partners while the facilitator made suggestions and coached.

Job Skills Inventory

What you do	What you think	What you say or write
get shop paper	prioritize my day	ask about problems
check machine turn on equip.	prevent problems does it sound right?	mark checklist
run a sample	does anything look wrong?	ask for help or opinion

Toothpicks, maps and scarves

Innovative teaching tools were brought into the classroom to effectively manage the diversity of learning needs and interests of the participants. Cooperative education methods were used to take maximum advantage of thinking styles and knowledge. Elaborate "jigsaw" problems were developed to mirror meetings and business decision making. Lessons were created to force students to share their skills and prior knowledge on math, math embedded in language, communication and language. At the same time students shared analytical, sequential and simultaneous thinking, categorization and decision making strategies. Instead of focusing on the technical aspects of writing or giving directions, student teams were asked to plan cross training methods for activities such as tying scarves, building toothpick structures and reading a map. Diversity in thinking emerged as an advantage when producing a quality process or product, although it was often a problem during initial communications. It became clear, then, that diversity in thinking would be an advantage on the job and that documentation must be written in a way that could meet different thinking style needs. Class activities convinced students that good technical writing was vital and they pursued the skills out of a personal motivation.

Now, let me tell you a little something

The diversity advantage and thinking skill applications became so clear to class participants that they made presentations to management about what they had learned. Classes invited managers and supervisors to see formal presentations in class and when that process seemed inadequate to spread the word, students from all four companies banded together to produce a half-day meeting at a local restaurant. The grant staff helped class representatives plan their presentations and organized the meeting time and place. the product was a remarkable sharing of a thinking style acceptance, awareness and application. Company executives received an overview of class content and context as well as several lessons in thinking and planning.

I planned an activities that I thought would make the participants work. I used some really far-out techniques to catch them completely off guard so that old thinking patterns would be challenged. Then I let them tell me how they did. They saw their deficiencies and their strengths and directed me on needs for further skill development.

Once participants developed their own reason to learn, teaching was easy. Often, they taught each other or presented to the entire class. Elizabeth

Practice what you preach

The Workplace Training Team produced a new curriculum, new tools and new company awareness and we continued to rework and rewrite the process throughout the third cycle of training. Cognitive Coaching was used to help teachers analyze their own processes and areas for improvement. Teachers traded classes to take advantage of teaching style differences and shared materials and methods as well. Teachers spent less time preparing customized lesson plans as flexible tools were developed and modifications for site specific context became student driven.

George Travis began with the project as the Project Director in May, 1993. He had an extensive background in administration of adult programs, but no specific workplace or basic skill experience. As the project progressed, it became increasingly clear that a project director must have expertise in the workplace and with basic skills/literacy learning. For example, the companies in this project were intent upon instituting work teams and flattening their administrative structures, while George was in the traditional, top down model of administration. By mutual consent, George Travis resigned from the project to pursue other employment which utilized his skills better, with Lestie Carey moving into the project director's role at that time. Her background in both curricular development and teacher training was the type needed in the project. Johanna

Progress

Class participants showed improved test scores. Company representatives and class participants reported higher levels of confidence in communications, better relationships with coworkers and improved team operations.

Company expectations changed over the course of the grant. Companies combined course participation with project assignments outside of class and brought more workplace materials and issues to class context.

Partner companies used grant classes for recovery from economic struggles and morale problems. Grant personnel became "agents of change" within the companies and had to fight to avoid becoming management consultants.

Class participants made changes to company operations, conducted company surveys and created cross training checklists, procedures and processes.

Class participants invited management to classes to enlist support for suggestions, made class presentations and eventually scheduled a cooperative presentation where class representatives from partner companies made presentations to executives about the value of classes and applications for new skills.

There's good news

After managers and supervisors attended student presentations and mini training sessions, the need for problem-solving meetings diminished. As the newness and excitement wore off, there were fewer problems to be solved. Student commitment was high as were class size and attendance. Although management understanding of class curriculum improved, their commitment to participating did not improve. Executive interest waned when they discovered the level of involvement it would take to learn new skills themselves. New knowledge systems require implementing change and participating company executives were not prepared to change very much.

And there's bad news

Participant dissatisfaction with skill practice on the job increased as their interest in the thinking and learning increased. Opportunities for job transfer were limited by company policies and reward systems. Teaming worked so well in class that participants wanted to continue the effort on the job. Students felt frustrated with the lack of cooperation between employees who had not been through the classes and between management and line workers. They complained that company policy inspired competition instead of collaboration. While classes emphasized process improvement and analysis and the application of knowledge and technology, managers focused on fighting fires and pointing fingers.

One of my most stubborn students was an accountant at Grimes Aerospace. She came to class religiously, but interrupted with complaints and objections.. Other class members would shake their heads and say she would never change.

After a few weeks the accountant began staying after class to request additional information "for her children." Before long she was listening intently in class and asking for help in understanding concepts. Participants complimented her openly on her improved work habits and confided in me privately that they actually enjoyed working with her.

By the time classes ended, the extremely sequential accountant who had defined very distinct categories for everyone and everything in her life was taking risks in her thinking and relaxing her rules. She produced a very creative cross-training manual with visual memory clues and "big picture" methods for making accounting decisions.

She went on to take the CPA exam and when she was laid off from Grimes she thought it was the best thing that could have happened. She knew she would not have the opportunity to use her new skills at Grimes. Elizabeth

A pleasant surprise was watching the participants weave information about learning into their lives. Scott from Grimes Aerospace restructured his discipline system at home based on thinking and shared responsibility after he realized that he always took responsibility away from others. He learned to trust the process of growing and mistakes became stepping stones to become an independent thinker.

Mary

Who would I talk to about that

The Workplace Training Team made their most profound impact in company communications. Class participants overwhelmingly reported that their abilities to communicate with friends, family and coworkers improved drastically. They brought examples of good and bad communication efforts to class with them and examined the thinking behind successes and failures. Participants used their new skills in presentations, cross training, memo and letters, telephone conversations, discussions with their children, coaching and teaching. When asked on post-surveys "Who should take this class?" participants responded "Everyone!"

The proof is in the pudding

Despite the lack of focus on traditional literacy topics, test results show statistically significant improvements in basic skills. Participants learned thinking strategies that improved their reading, math and math embedded in language skills. They applied their skills beyond literacy tests to suggest product advancements, quality management techniques, production process changes and communication improvements. Classes made presentations to management groups, promoted reengineering and cultivated teamwork . Students moved up within company structure, moved on to find other jobs and went back to school.

Quotes--Keith Nigh from The Hall Co.

The training "helps you know how others work and how they take in [information] and need to be trained. The most important thing I learned was how people learn and different ways to communicate with people."

Quotes--Elaine Lininger from Grimes Aerospace

"Presently, I am in the process of training somebody on something new to them, and it gave me insight into how I can present the information so she can learn quicker."

Some Company-Wide Results:

- LewiSystems is laying the ground work to begin self-directed teams. Grant personnel as been asked for input on the process and management has requested training for themselves.
- Grimes Aerospace has implemented highly structured problem solving training for teams.
- Comdyne has planned company wide in-house training. Former grant class members are the curriculum advisors and trainers.
- The Hall Company has implemented and continued teaming for all plant operations. They have contracted continued training from grant personnel.

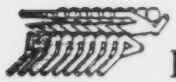
Quotes--Ruth Ramey from Comdyne

"We use the training on the job . . . we utilize each individual for impact . . . and get effectiveness from the whole team rather than just a few individuals."

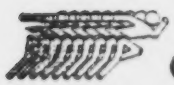
Quotes--Kelly Bryan from LewiSystems

"The people who protested the most were probably the ones that really got the most out of it. I could absolutely see the differences in communication among the group that I was with and I'm sure they'll carry that with them."

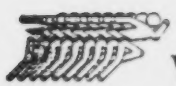
Future



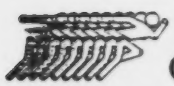
Partner companies are doing their own in house training, are scheduling workplace training sessions with other sources and class participants are pursuing continued education.



Grant classes are continuing under contractual agreements with partner companies.



Workplace Team has contracted to train the teachers in other workplace training projects.



On-site training contracts are being pursued with local business interests, including parent companies of local manufacturing and service using continued education.

On the Horizon

The Workplace Training Team is currently working to become an independent, self supporting part of a bigger project now being called the Workplace Training Collaborative. The WTC will be a consortium of trainers and a training broker. Plans are being made to work in cooperation with Urbana University to conduct a 6-month investigation into demand for training, need for collaboration in education, etc.

Quotes--Hal Barker Assistant Superintendent CCBOE

In industry today the "emphasis is shifting from machinery and muscle to the use of knowledge."

"The grant gave us the chance to prove ourselves. We have always had the resources and connections to offer training in areas like basic skills and blueprint reading. As the area's primary learning center, we feel its a natural extension for us to offer local companies an affordable way to attend consulting seminars and keep up with trends like ISO 9000. It is in our best interest and in the best interest of the community to support continued learning and development in the area."

The national workplace literacy projects should have project directors who have expertise in the workplace, in literacy/learning and in adult education. All three areas are critical. These projects are too small to support an administrator who cannot play multiple roles. It is vital to have experience working with businesses and unions, when involved, as they are the venue for which the curriculum is created. Johanna

As a separate project, the Workplace Training Team is also pursuing potential training contracts with companies in the area. One grant partner has already contracted for three more classes and another has requested a proposal. Grant partners have offered referrals and other local businesses have been approached with training information, suggestions and proposals.

Other dissemination efforts have included a Regional Meeting, presentations at the Ohio School Board Association annual meeting, training of other workplace training staff and press releases in local papers and state publications.

In my estimation, one of the most neglected elements in the National Workplace Literacy Program is teacher training. Workplace literacy teachers are made, but not by the teacher training we have now; they do not uniformly come from K-12 education, from adult education, from the ranks of trainers, or from those who teach in community colleges. This is because they need three critical knowledge bases: literacy and language; adult learning; and the workplace. They also need to be able to help create program curriculum, experience which few teachers have, unfortunately, as they tend to be bound by ready-made curriculum such as GED or basic skills programs, etc. Australia has recognized this distinction already by setting up M.A. programs specifically for workplace literacy. Johanna

Conclusion

More than a decade ago, in The Origins and Growth of Action Learning, R. Revans sets forth a basic equation for organizations survival. The equation, $L \geq EC$, tells us that learning must be equal to or greater than environmental change, or the organism will perish. Organizations with a future will behave more like a living organism in the way they organize, adapt, change and in the way they learn. An organization which recognizes the fundamental truth of Revans' survival equation and behaves accordingly will be well suited not only to survive, but to excel.

The pace of environmental change calls for a new approach to learning. Traditional learning focused on the skills needed for today's challenges will not prepare a learner, or an organization, for the challenges of the future. For learning to keep up with, or exceed the rate of environmental change, it must focus not only on what people learn and need to learn, but how they learn.

The philosophy behind this project was that people who know how to learn can learn at a much faster rate--a rate which can keep pace with environmental changes. By focusing on learning to learn instead of learning to pass a test, students became cognizant of how they know and learn. Participants became active learners who were prepared to learn any new skill and apply new skills to the job more quickly. There was a shift from what Peter Senge calls "adaptive" or single loop survival learning to "generative," double loop learning which enhances an individual's (and an organization's) capacity to create, adapt and change.

Applied to thinking, Senge's single loop adaptive thinking would be the thinking required to conform to a standard. Generative thinking would lead to examining the meaning, communication, understanding, application and appropriateness of the standard. Both types of thinking are necessary, however generative thinking allows an organization to adapt and change according to environmental pressures. Workplace training, now and in the future, must focus on helping business and manufacturing concerns become dynamic, responsive, innovative, learning organizations. Such organizations

need a pool of employees who know how to communicate, how to solve problems, how to question--in short, how to think.

Workplace training programs must respond to organizational needs by moving away from simply dispensing information. We must give workers opportunities for understanding, empowerment and self-renewal. Building the type of learning environment which helps people make sense of their environment, improves the flow of communication through the system, and reconnects the body and mind of the employee is a task not defined by traditional literacy projects. It begins with new curricula and innovative teacher training. It is built on teamwork and continuous, formative, internal evaluation and improvement.

The workplace training model presented in this final report was driven by a learning to learn philosophy created by Lestie Carey from her work in cognition and the brain. The teacher training was focused not only on skills, but on cognitive teaching that asked teachers to constantly learn, adapt and change. The curriculum core was adapted from Carey's research for the workplace setting and included all components of literacy--basic skills, communications and math--woven together in an integral way. The Workplace Training Team functioned as a dynamic group that shared an equally dynamic set of thinking skills required to meet the demands of the future.

Literacy training as defined by this model, as well as the SCANS report, impacts communications, work flow, decision making, supervision, diversity and valuing, data interpretation and analysis, self-management, personal development, conflict resolution, meetings, evaluation and feedback, risk taking and creative thinking, influencing and control issues, cross-training and continuing education. Such a project required the Workplace Training Team and participating companies to evolve as a group of learners who were constantly gaining a better understanding of how to respond to student needs, to other team members and how to create regular feedback loops for project improvement.

A focus on basic skills such as reading, writing and math does not change the dynamics of the workplace, the ways in which employees interact with management or the delegation of responsibility and control. The results of the literacy training described here and in the SCANS report do not mirror

that of basic skills training. This type of training improves skills formerly associated with management roles, requiring management to adjust formal and informal incentives and expectations, participate in planning and upgrade their own skills in areas such as learning to learn, audience awareness, strategic planning, motivating others and maximizing diversity. The successful integration of this training into corporate culture is the real measure of success in this project.

Director's Comments

The goals that were established for the project also became the goals for the Workplace Team. The Team modeled the problem solving, continuous improvement and upgrading of skills that we desired for the class participants. The workplace staff learned about personal learning styles/needs and how to adjust communication to benefit from the diversity of the Team. The facilitators improved their teaching and assessment skills. The Problem Solving and Foremen/Supervisor committees allowed the Team to practice continuous improvement when the Team presented progress reports twice a month. The committees, those who were being impacted by the training, offered feedback and critique and group problem solving for better ideas. The Team continually assessed and adapted to changing needs and perceptions.

Goals	Accomplishments
Goal #1 **To upgrade skills needed for job performance**	Standardized tests and informal surveys demonstrate an upgrade in literacy skills (please refer to evaluator's report for specific results)
Goal #2 **To prepare workforce for SPC/TQM instruction and participation**	Participant surveys and management/supervisor interviews demonstrate improved communication, problem solving skills and increased participation in TQM processes.
Goal #3 **To increase problem solving**	Participant surveys and presentations demonstrate improved problem solving skills as well as more efficient cross training procedures and participation on problem solving teams. The Hall Co. was able to switch the entire plant to 2-3 member floor teams, Grimes Aerospace began company wide problem solving teams and reported that graduates of Workplace training learned the new model faster that other employees and were the most comfortable with the new format. LewiSystems began an employee improvement team based on the experience of training participants. Graduates of training at Comdyne helped design and implement a company wide training program at the end of the grant.
Goal #4 **To document gains made in Goals 1, 2 & 3**	Pre and post and on-going formal and informal assessment tools were administered to all participants. The results were compiled for the outside evaluator's report. Not all participants were administered both the pre and post assessments due to scheduling conflicts.

Number of Students Trained and Number of Training Classes

The grant proposal targeted 300 participants for the training classes. 240 people completed the training. The discrepancy was the result of many factors. Three of the business partners experienced "downsizing" during the grant. For example, Grimes Aerospace reduced employee numbers from 1,500 to 1,200 and hired temporary employees. The Hall Company reduced forces from approximately 80 to 50 employees. Comdyne began with approximately 80 people, dropped immediately to approximately 60 employees and fluctuated to as low as 38. Despite these problems, Grimes Aerospace and The Hall Company meet their anticipated goals.

LewiSystems was in the process of renovating and enlarging their plant for the duration of the grant. This plant employees 4 shifts to operate 24 hours a day with 3 shut down days a year. The company planned for the building program to not interfere or negatively impact production. This goal became difficult when problems appeared such as the need to move warehousing operations 15 miles south to the next town and movement of raw materials throughout the plant was disrupted. Employees were expected to compensate for these difficulties with more hours of work. This directly impacted training. LewiSystems had anticipated training a minimum of 50 people while only 15 completed the training. The company endorsed and supported the training except that they could not justify pulling employees off the floor in a consistent manner. The building project was completed about the same times as the training classes. They continue their support of this training as they have recently contracted with the Champaign County Board of Education to train their executives and the members of their first self-directed work team.

The goal for the number of classes was 18 and 17 classes were completed. One class at Grimes Aerospace was dropped during the first cycle due to company changes. Machine operators were in this class and their department was reduced to a few people and the operations were moved to Florida.

Recruitment of Participants

Initially executive representatives from three of the business partners determined who would participate in the training with the exception of The Hall Company who simply divided their work force into 3 groups, one for each training cycle, and required everyone to attend the training.

Grimes Aerospace choose to seek volunteers for the second cycle of training. The Workplace Team developed a "flyer" for posting on company bulletin boards and the executives arranged for 25 minute presentations to interested workers. The goal was to identify 50 employees at Grimes. 210 employees volunteered for the classes so the company then had to prioritize who attended.

LewiSystems had the participants from the first cycle continue into the second cycle due to the classes meeting only once a week. The same information was presented twice weekly in an attempt to meet the scheduling demands of 4 shifts.

Comdyne executives identified the line workers they wanted in the second cycle.

Comdyne, LewiSystems and Grimes participants were volunteers for the third cycle. At Grimes an additional, small class was created by requests from supervisors/foremen who felt they needed the training also. LewiSystems continued to have trouble identifying workers for the classes. In contrast to the other companies, they had only one executive who worker with the project so most of the management team did not understand the goals of the training. They were also in the midst of a large renovation and building project. The management team has contracted with the Workplace Team to continue training after reviewing the benefits of the training and the problems in recruitment that occurred during the grant.

Proposed Considerations For Selection Of Participants
For Class Starting - January, 1994

1. Availability for 20 - 25 persons per class.
2. Voluntary participation.
3. Workers who have clearly identified goals.
4. Presence of some kind of reward system.
5. Mixed job classifications.
6. TQM/SPC related job responsibilities.
7. Workers commitment to attend classes on a regular basis.

Recruitment

Dissemination Activities

- **Ohio School Boards Capital Conference**
  - **Round table and Presentation Seminar**

- **Regional Review Workshop**
  - **sponsored by the Workplace Training Team and the Urbana/Champaign County Chamber of Commerce**

- **Local Seminar**
  - **sponsored by the Workplace Training Team and the Urbana/Champaign County Chamber of Commerce**
  - **presentations by class participants from first teaching cycle**

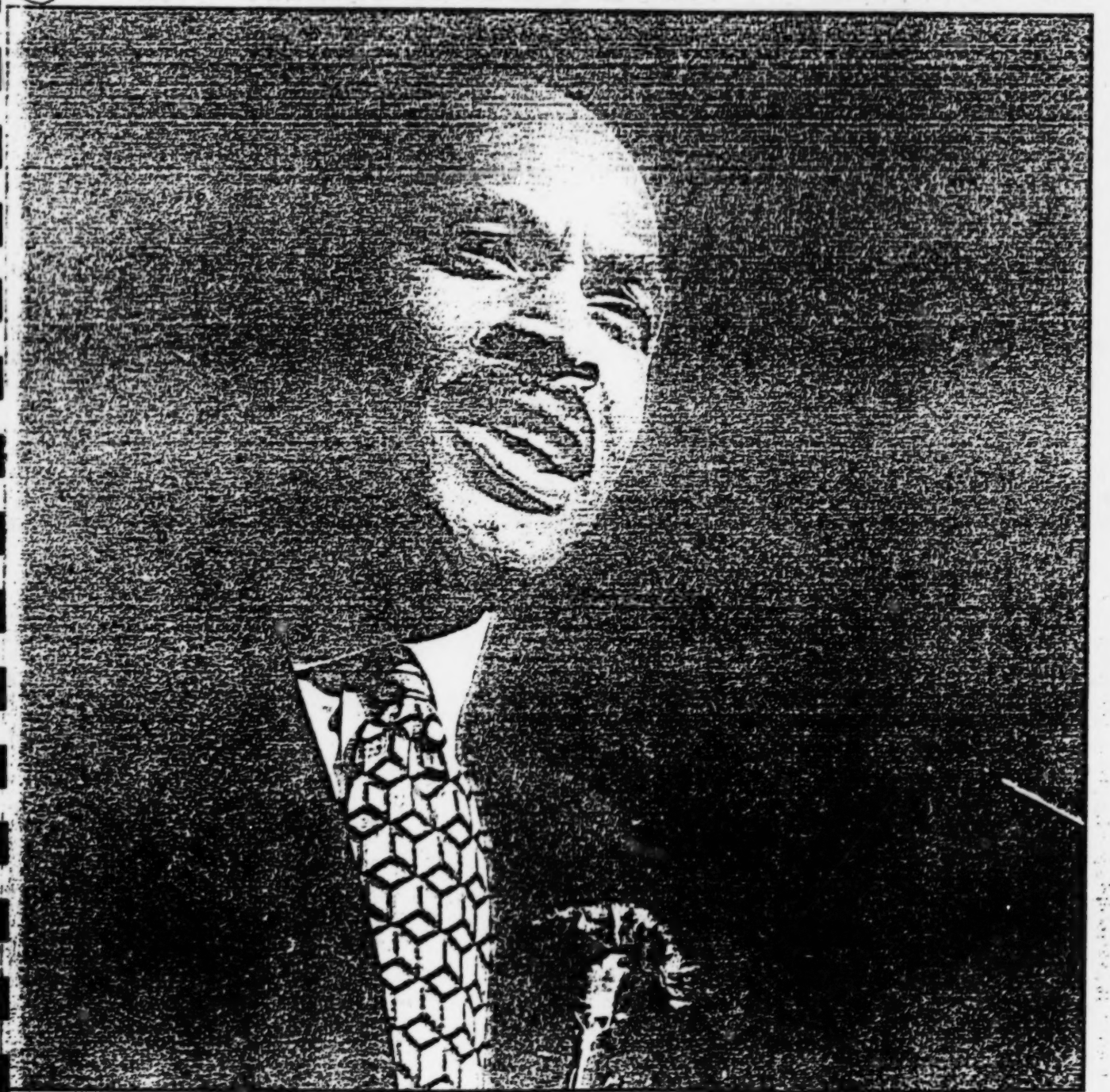
- **Final Wrap up Seminar**
  - **company representatives summarized the training for local government officials and business people**

- **Training of Trainers**
  - **The Center-Resources for Education, Des Plaines, Illinois**

- **Workplace Curriculum, content and process, that can be replicated**

Capital Conference Reporter Magazine

A publication of the Ohio School Boards Association



January 1995

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38 BEST COPY AVAILABLE

Are you ready to govern and lead?

Speaker: **P. Michael Robinette**, board president, **Kettering City**
Moderator: **Patrick Gray**, board member, **Licking Heights Local (Licking)**
Reporter: **Elmo Smalley**, board member, **Scioto County & Scioto County JVSD**

In 1991, the **Kettering City** School District experienced a teachers' strike.

One result of the strike was a completely new school board. Two new members were elected in 1992, and three joined the board in 1993.

The new board quickly decided they wanted to do business in a different way and voted to adopt a strategic plan for the board.

The new strategic plan included 11 principles dealing with board governance. The plan, in a simplified manner, identified the plan owners, the board's job description, in addition to the "means and ends" of the board. The ends are the results of improving education for kids.

Included in the strategic plan is a board governance policy that addresses the relationship between the board, the superintendent and the treasurer. With this governance policy in place, the board can monitor district operations, but also lets the administrators do their jobs, which is educating the children of the district.

Optimizing workplace training through the county office

Speakers: **Jim Duke**, director of quality assurance, Grimes Aerospace; **Lestie Pennel Carey**, workplace training director; **Mary Wurst** and **Elizabeth R. Spievak**, facilitator and coordinator; **Champaign County**
Moderator: **Patricia Papoi**, board vice president, **Forest Hills Local (Hamilton)**
Reporter: **Jan Solomon**, board member, **Lordstown Local (Trumbull)**

Today's global economy with its fierce competition among business and industry demands a workforce capable of higher level thinking and problem solving skills.

While multi-national corporations have the means to provide internal team training centers for their labor force, most smaller companies do not.

The **Champaign County** Board of Education, with a federal grant and $400,000 from four private companies, instituted a training program that goes beyond technical and basic problem solving skills to teaching workers how to think, a concept called Metacognition.

"We've taken the best of the old and brought in new ideas to our training program. We are open, flexible and able to respond," said **Lestie Carey**.

Champaign County is mainly agricultural with two thirds of its 432 square miles in crops. Thirty major industries, 150 retail stores, 70 professional businesses and 55 service companies also operate in the county.

An active business advisory council promoted the education and workplace training concept, according to Carey.

Establishing the metacognition training program has benefitted both the business community and the schools.

Jim Duke says learning metacognition has taken his labor force to a level of trust, respect, teamwork, and innovation that has increased his company's competitive edge in the global market.

The school's participation has added benefits like summer job shadowing for teachers, a new foundation fund, brown bag seminars, and strategic planning with corporate heads.

Wurst added that the program has also raised the county office's image. "People in our classes are our parents as well as our voters. Its an enormous loop — what we are teaching here goes home," Carey noted.

Employees background checks done right

Speaker: **Joel Woods**, Huffmaster Associates
Moderator: **Jim DiPaola**, board president, **Ravenna City & Maplewood JVSD**
Reporter: **Don Crewse**, superintendent, **Rootstown Local (Portage)**

"School boards must understand they are held to a higher degree of responsibility," said **Joel Woods**, as he explained the importance of employee background checks.

Following a brief presentation by moderator **Jim DiPaola** on the 1993 laws passed requiring boards of education to check the background of new employees, Woods focused on the process of background checks.

He noted that the BCI check is simply fingerprinting as opposed to additional checks such as telephone contacts with previous employers and written recommendations. A potential problem in the process is the difficulty small law enforcement agencies have in terms of follow-up time.

Woods added that bus drivers have official checks done every two years which should be documented.

Background investigations are designed to protect children and as such, the approach should be

Kathy Leavenworth, West Geauga Local (Geauga), was one of many who stopped by the OSBA Bookstore to browse, or buy a book or T-shirt.

Capital Conference

Continuous Process Improvement

- Every employee in all our facilities received 24-40 hours of CPI training conducted in a team environment.
- Those team members that participated in the Workplace Training adapted much faster and understood the process much quicker.
- Empowerment is a result of the CPI program and Workplace Training.

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The Learning Link

In industry today, the "emphasis is shifting from machinery and muscle to the use of knowledge." Hal Barker, Assistant Superintendent, Champaign County Board of Education.

"This training will have a lot of effect . . . we can do things quicker and much more effectively." Elaine Lininger, Grimes Aerospace.

"The most important thing that was learned in the class was how other people learn. In my job I've got to work with every department and it helped a lot." Bryan LeVan, Comdyne.

The most important thing I learned was "different ways to communicate with people." Keith Nigh, The Hall Company.

"Miscommunications cost a lot of time and money . . . and I think this class will help this immensely." Joe Pandin, Grimes Aerospace.

38 Prepared by Leslie Carey and Elizabeth Spievak [illegible]

Workplace requirements are changing rapidly as companies struggle with pressures to downsize and keep up with global competitors.

In times of tight budgets and layoffs it is difficult to commit people to training--is it worth it?

Participate in the Regional Review of Workplace Training and Education to discover new opportunities and come away with names, information, and a planning outline from companies and educators who are leading the way in workplace training and education.

For more information call:

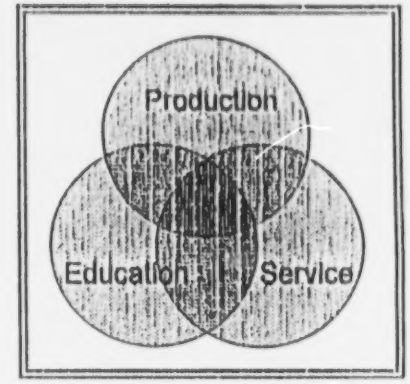
Workplace Training Team, 513-653-5296.
or
Mary Lee Gecowets, Urbana/Champaign County Chamber of Commerce, 513-653-5764.

The Champaign County Board of Education

and

The Urbana/Champaign County Chamber of Commerce

present:



Regional Review of On-Site Education and Training

Wednesday, October 12
7:30am to 11:30am
Millners Cafeteria, U.S. 29
Urbana, Ohio

How do you know if you should be training your employees?

Find out how to begin a needs assessment and uncover the benefits of training in your company.

How do you know if your current training is effective?

Discover the essential questions you should be asking facilitators, front-line workers and managers to evaluate effectiveness.

Is on-site training right for your company?

Learn the advantages and disadvantages of on-site training and education.

What is the return on your training investment?

Participate in goal setting exercises and learn evaluation planning techniques to find out how to get what your company needs and wants out of a training program.

What about changing needs?

Flexibility is the key in industry today and education and training are no exception. Learn how to plan for change and how to build a training program that is consistent and flexible.

What training is necessary for managers?

Find out how management participation differs from management support and how administration affects the outcome of a training program.

What about cost?

Learn first-hand how companies apply cost-value analysis to their on-site training.

Learn the answers to these questions and more at the Regional Review of On-Site Education and Training.

Yes! Sign me up for the Regional Review of On-Site Education and Training On Wednesday, October 12, 1994.

A check for $25 per participant is enclosed.
This registration fee includes breakfast from 7:30-8:00am and all materials.

Number of participants _____ Company or Affiliation _____

Names _____ Daytime Phone _____

_____ Daytime Phone _____

_____ Daytime Phone _____

Registration is limited to 100. Workshop hours: 7:30- 11:30am
Return registration and fee to: Melissa Shook
CCSOE, Box 269
Urbana, Ohio 43078

Business/economy

Local companies support workplace training

Special to The Citizen

Representatives of four local companies from six locations came together last month at Milliner's to share their workplace training programs and experiences.

A federally funded workplace training grant, acquired by the Champaign County Board of Education, brought together LewiSystems, Grimes Aerospace, The Hall Company and Comdyne Inc. to discuss the benefits of workplace training and the importance of maintaining a competitive edge in the market place.

Workplace requirements are changing rapidly as companies struggle with pressures to downsize and keep up with global competitors.

"Our employees need to be empowered ... to learn to go into a situation and solve it for themselves," said Barb Philibert of LewiSystems. She reported that supervisors felt caught between production and sending people to class, but that "it was worth it in the long run."

Participants from the training classes made presentations to company management, grant staff and guests such as Mary Lee Gecowets, executive director of Urbana/Champaign County Chamber of Commerce. Every presenter echoed Keith Nigh from The Hall Company, who said, "The most important thing I learned was how people learn and different ways to communicate with people."

The grant-developed curriculum is focused on the differences in learning styles and the development of personal thinking skills that can be applied to any learning situation.

"Learning differences affect communications, work habits, planning abilities ... virtually all workplace issues. Once employees become aware of their own learning and thinking styles, they can identify differences in others and become more effective — at any level," says Leslie Carey, grant coordinator and transition coordinator for Champaign County Board of Education.

Participants in training seem to agree. "Understanding your learning styles can make you more effective as a problem-solver," reported Elaine Lininger from Grimes Aerospace. "Recently, I am in the process of training somebody ... and it gave me insight into how I can present the information so she can learn quicker."

Kelly Bryan from LewiSystems also reported workplace improvements. "I thought the classes were really good. I could absolutely see the differences in communication among the group."

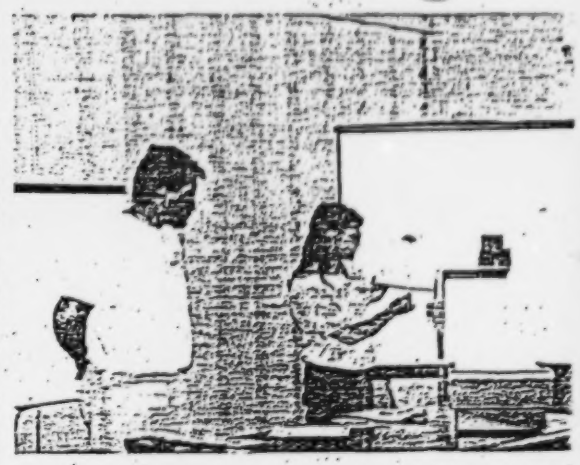
The workplace training grant required participating companies to donate classroom space and paid release time for class attendance and management planning. Class participants and management representatives agreed that in times of layoffs and tight budgets it was sometimes difficult to commit people to training — even "free" training with a grant funded curriculum, classroom facilitators and administrative support.

Meeting presenters felt that companies had made the right choice.

"Miscommunications cost a lot of time and money ... and I think this class will help this immensely," said Joe Pandin from Grimes Aerospace. Lininger agreed, "I think this training will have a lot of effect ... we can do things quicker and much more effectively for both ourselves and others."

Based on the class she attended, Ruth Ramey, from Comdyne in West Liberty, produced what she calls her "Stairway to Success." The steps are based on what she feels are some of the most important class concepts. "Teamwork leads to new positive attitudes, understanding all individuals with open communications to reach our company goals."

"The decision to train employees is something of a leap of faith, but today has shown how rewarding that leap can be," said Hal Barker, Assistant Superintendent at the Champaign County Board of Education. In industry today, the "emphasis is shifting from machinery and muscle to the use of knowledge," he continued, "and our office is here to assist you."



Bryan LeVan (left) and Ruth Ramey spoke at a recent luncheon on workplace training. The luncheon was attended by four local companies.

PROGRESS '94

Champaign County's annual report

Countdown to 2000

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May 27, 1994

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A supplement to

The Urbana Daily Citizen

$1

33 Years and Growing Stronger
Through Employee Empowerment

THE HALL COMPANY

"The Hall Company paid out more money for Suggestion Awards this year than ever before, and I'd be elated to surpass that figure in the future."

-James A. Hall, President

The Hall Company extends its appreciation and congratulations to the two groups involved in setting productivity records in our 33rd year:

The Employees of The Hall Company Inc.
and
The Champaign County Board of Education.

In 1993, The Hall Company and Board of Education commenced the Industrial Workplace Program. Our employees each received 60 hours total on-site training on topics from teamwork to metacognition and the results were dramatic. Special thanks to Lestie Carey and Staff for being adaptable, caring and effective.

420 East Water Street, Urbana, OH 43078
Phone: (513) 652-1376 Fax: (513) 653-7447

Education and learning

Companies finishing training program with county office

Special to The Citizen

Four local companies are wrapping up an 18-month commitment to employee training that proved to advance basic skills, employee communication and job skills.

LEWISystems, Grimes Aerospace, The Hall Company and Comdyne Inc. have been donating classroom space and paid release time for participation in an unusual training program.

The innovative curriculum was developed through a federally funded workplace training grant acquired by the Champaign County Board of Education. Training was focused on the business advantage of diversity and learning differences at work. Participants developed personal thinking skills for application on the job and for use in future learning situations.

"Learning differences affect communications, work habits, planning abilities virtually all workplace issues. Once employees become aware of their learning and thinking styles, they can identify differences in others and become more effective — at any level," says Lestie Carey, grant coordinator and Workstudy Transition Coordinator for the Champaign County Board of Education.

Although it was the grant donated curriculum, facilitators and administration that convinced the business partners to participate, at least 2 of the 4 companies are planning to continue the training after the grant expires.

"Even with one-third of our employees in training, productivity improved over the course of the grant," said Don Carone, general sales manager of The Hall Company. "We know there are more gains to be made, so we plan to continue to offer this type of training."

Participants support Carone's beliefs.

"Understanding your learning styles can make you more effective problem-solver," says Elaine Lininger from Grimes Aerospace. "Recently, I am in the process of training somebody ... and it gave me insight into how I can present information so she can learn quicker."

Kelly Bryan from LEWISystems also reports workplace improvements. "I thought the classes were really good. I could absolutely see the difference in communication among the group."

Workplace requirements are changing rapidly as companies struggle with pressures to downsize and keep up with global competitors.

"Our employees need to be empowered ... to learn to go into a situation and solve it for themselves," says Barb Philibert of LEWISystems. She reports that supervisors felt caught between production and sending people to class, but that "it was worth it in the long run."

In times of tight budgets and layoffs, participants feel that companies made the right choice when they decided to offer the training.

"Miscommunications cost a lot of time and money ... and I think this class will help immensely," Joe Pandin from Grimes Aerospace commented. Lininger agrees. "I think this training will have a lot of effect ... we can do things quicker and much more effectively for both ourselves and others."

"That grant gave us the chance to prove ourselves," says Hal Barker, assistant superintendent at the Champaign County Board of Education, who is spearheading the Workplace Training Cooperative project.

The WTC will be a network of training and educational resources with a library of materials and information contacts for local businesses.

"We have always had the resources and connections to offer training in these areas. As the area's primary learning center, we feel it's a natural extension of our services for us to offer local companies an affordable way to attend consulting seminars and keep up with trends like ISO 9000."

Small companies and rural areas often have a difficult time justifying consultants, training seminars or trend analysis, but in industry today "emphasis is shifting from machinery and muscle to use of knowledge," Barker points out. "Its in our best interest and in the best interest of the community to support continued learning and development in the area."

The Workplace Training Cooperative will be holding a Regional Review of On-Site Training and Development on October 12. Topics will include: cost/value analysis of training, management planning and participation, needs assessment, training evaluation, and a review of grant curriculum. For more information or reservations contact Melissa at 653-5296.

BEST COPY AVAILABLE

Teacher Training

In this project, an on-going teacher training program was created which included literacy and language education, adult learning, workplace and experience in curriculum creation. Teachers were trained intensively during the start-up phase. During that time teachers assessed their readiness and contributed to the training plan. In this way teachers learned, through modeling, how to create a curriculum and how to modify training plans according to student needs.

Most teachers in workplace projects are drawn from the ranks of people who teach adults, usually in GED or basic skills programs which are academic in nature. Workplace projects precisely are not academic, but many teachers are not aware of the different kinds of skills and abilities which can be built and nurtured by creative curriculum. The training component in this project focused on helping teachers understand the opportunities for skill growth in a workplace application. Teachers learned a very different approach to teaching and learned how to create curriculum in a dynamic manner with learner participation.

Teacher training was based on the principles of cooperative learning, integration of targeted skills and empowerment of learners who have negative attitudes about traditional classroom learning. Metacognition and cooperative education methods were used in teacher training so that techniques were modeled and practiced. Teachers were asked to use metacognitive skills in assessing their own learning and teaching styles. By beginning teacher assessment during teacher training, the stage was set for team learning, team teaching and continued growth.

On-going teacher training sessions were scheduled biweekly at the onset of work site training and monthly thereafter. The Workplace Training Team reviewed class needs and progress and focused training topics accordingly. Since this program stressed creation of a curriculum integrated into the individual work sites with heavy company and learner collaboration, teacher training needs were varied and ever changing. The team, in effect, created and maintained a model that mirrored business challenges.

Teacher Training

Successful teacher training was a crucial component for this project. The teachers were required to constantly improve their training approach as they evaluated their progress and received feedback. The lesson plans were not available in a textbook nor based on published worksheets but rather they were original to meet the needs of each class. The teachers/facilitators were taught teaching processes and activities and the content came from the curriculum menu compiled by the Team. The facilitators chose the teaching process and activities on the basis of communication requirements of the workers in each class and their individual learning styles and needs. The content was chosen on the basis of the Literacy Task Analysis, Job Skills Inventory, standardized tests and the GAP reading analysis.

The start up time for this grant cycle was too short for sufficient teacher training and curriculum development. An effective training program is based on good teaching practices supported by a strong curriculum. These could not be developed prior to the beginning of training so the project depended on continuous improvement processes to survive.

Teacher training involved a variety of components designed to prepare the teachers to become facilitators and cognitive coaches of learning. Teachers needed to be flexible learners themselves and be adapt at designing lessons that structured complex learning activities integrated with skills based outcomes. The teachers were required to learn about their own learning needs and to explore how they build knowledge systems prior to training other people.

The following list provides the main components of the training program.

- Problem Solving Models
- Metacognition
- Adult Education History and Theory
- Portfolio Assessment
- Discovery Learning
- Adult Literacy Skills
- Literacy Task Analysis
- Corporate Culture and Training Issues
- Continuous Improvement Processes
- Job Floor Materials & Literacy Skills
- Problem Solving Processes
- Learning Theory & Strategies
- Learner Assessment Theory & Strategies
- Cooperative Learning
- Whole Language Processes
- Curriculum Development/Mapping
- Standardized Assessment procedures
- Lesson Plan Development
- Cognitive Coaching
- Total Quality Management

Teacher training involved three weeks of intense training prior to beginning of classes and on-going training every other Friday for the duration of the grant.

The following pages include sample agendas, the Mission Statement developed during teacher training, lesson plan tracking forms devised by the facilitators that helped identify topics to cover in the Friday training classes and sample reading lists used for training.

WORK PLACE LITERACY GRANT
TEACHER TRAINING SCHEDULE
Preparation for First 15 WeekTeaching Cycle

June 21	•Overview of Work Place Literacy Presenter - Dr. George Travis, County Office of Education •Details of partner companies products and goals Presenters - Virginia Stanley, Grimes Aerospace Lestie Carey, County Office •Details of interagency collaboration efforts that led to formation of the grant Presenters - Mary Lee Gecowets - Chamber Dr. Hal Barker - County Office •Metacognitive self assessment and strategies Presenter - Lestie Carey
June 22	• Education and Training in the Corporate Climate Presenters - Dr. David Kalamas, Clark State Community College Edwin Corwin, Urbana University JoyceVonderheid, Positive Options •ISO - International Organization for Standardization Presenter - Ray Knull, Grimes Aerospace
June 23	•Overview of Adult Education Presenter - George Travis •Metacognitive Factors and Cognitive Brain Research Presenter - Lestie Carey
June 24	•Adult Literacy, Assessment Factors Presenter - George Travis
June 25	•Formation of a Literacy Task Analysis Presenter - Dr. Johanna DeStefano, O. S.U.
June 28	•Composing a LTA and Lesson Plans Presenter - Johanna DeStefano
June 29	•Tours to four of the business partners
June 30	•Compsing a LTA and Lesson Plans
July 1	•Cooperative Learning Techniques Presenter - Lestie Carey
July 2	•Metacognitive Strategies or Cooperative Learning Presenter - Lestie Carey

AGENDA

June 21:

9:00 a.m. **WELCOME**

Dr. Francis Hazard, President - Urbana University

INTRODUCTIONS - Dr. George Travis, Project Director

Workplace Literacy: A Functional Definition

George Travis

The Champaign County Board of Education Workplace Literacy Program: Proposal Development, Partners, Progress to Date -

Dr. Herald Barker, Assistant Superintendent,
Champaign County Schools

Lestie Carey, Workplace Literacy Coordinator

10:15 a.m. **Break**

10:30 a.m. **Staff Development Overview** - George Travis

Workplace Literacy - Cognition and Metacognition

Lestie Carey

June 22:

9:00 a.m. **Education and Training in the Corporate Climate**

Dr. David Kalamas, Assistant Director, Center for Human Resource Development - Clark State Community College

Edwin Corwin, Assistant to the Dean for Community Education
Urbana University

Joyce Vonderheid, President, Positive Options, Inc.
Centerville, OH.

9:45 a.m. **Break**

10:00 a.m. **ISO - International Organization for Standardization**

Ray Knull, Manager - Quality Systems - Total Quality Management
Grimes Aerospace

TEACHER TRAINING AGENDA
OCTOBER 8, 1993

•Staff will divide into 2 groups for the purpose of each teacher sharing their concerns, directions, and training needs. Mary will share with Johanna and George while Elizabeth and Lestie will share. Each team will share a summary of their discussion with the purpose of using the entire team to address issues and to determine future training needs.

•George will present his example of diagnostic test results (TALS) and consult with the team to determine how to present the information for efficient teacher use.

•The above test results may be used to model how to plan a lesson geared to the specific literacy needs of the class. Individual test results may also be incorporated into the teaching model which will assist the teachers in meeting the needs of a variety of learners.

•Johanna will share sentence combining and spelling resources.

•The group will compare and contrast a teacher centered classroom vs a student centered room as well as explore the need to structure a student centered room.

•The group will discuss with Johanna the possibility of using the TALS math to replace the ABLE as well as the possibility of deleting one evaluation tool.

•George will introduce the range of possibilities for scheduling the teachers' time during the months of November and December. The group will not need to make a decision at this meeting.

STAFF DEVELOPMENT - Aug. 1993
CCBE Workplace Literacy Project

A. Introductions:
   1. Selves: Who we are, what our relevant experiences have been, etc.
   2. The companies: Comdyne, Grimes, Hall Company, LewiSystems -- their culture, materials, learner characteristics, e.g. culture, disabilities.
   3. Teaching experiences: effective procedures, strategies, methods, helpful materials, etc.
   4. Questions for us: Project details, partner details, etc.

B. Conceptual strands:
   1. The workplace in general and in particular
   2. Adult education principles and practices
   3. Workplace basics -- as foundations -- includes communications which is speaking and listening, reading and writing; numeracy
   4. Metacognition -- learning to learn, problem solving, and teamwork are included.

C. Assessment/diagnosis procedures & instruments
   1. Test of Applied Literacy Skills (TALS) - use BSD p. 63 with this
   2. Clozes
   3. GAP
   4. Portfolios
   5. Math ABLE
   6. Learning styles inventory
   7. Creating Individualized Educational Plans (IEPS)

D. Literacy Task Analyses Jones's Part II
   1. Literacy task analyses in plants -- procedures, notes, etc.
   2. Lesson plans

E. Curriculum – See p. 19 ff, Volume One Field

1. Strategies/Processes
   a. Whole language
   b. Cooperative learning
   c. Reading strategies — Simulations
   d. Writing strategies
   e. Oral communication strategies
   f. Math strategies
   g. Scenarios, role playing, demonstrations
2. Materials
   a. Materials from each plant -- safety manuals, job guides, shop orders, equipment manuals, etc.
   b. Teacher-created materials
   c. Other sources

Industrial Workplace Training
Mission Statement

The Champaign County Board of Education and business partners will reach beyond the limits of traditional adult basic education to offer a unique project. Workers will leave this project not only with basic literacy skills, but with a framework from which to continue their learning on and off the job. They will have a skills set that is shown to improve the ability to assimilate basic skills, communicate more effectively, adapt to change and to decrease the learning curve and need for supervision. In the dynamic, high productivity environment of today's workplace, this project will change the way workers see themselves, their supervisors and co workers, their jobs and, most importantly, the way they approach any learning experience. By revamping the vehicle through which basic skills are offered this project will reach workers that traditional education has missed and offer them innovative ways to engage in lifelong learning.

As a result of this project, employees will demonstrate an increased willingness to participate in TQM/CQI processes and will acquire the skills necessary to make significant contributions in quality control and problem solving situations. In addition the work environment will produce improved job maintenance, career advancement, and less turnover.

		LITERACY OBJECTIVES		
TEACHER	**CLASS**	**DATE**	**SKILLS**	**PROCESSES**
Mary Wurst	**Grimes Rt. 55**		Writing clear objectives Organizing sequences	Decision Making Determining Audience Prioritizing/Sequencing Communication/Active Listening.
"	"		Paraphrasing Writing clear definitions (awareness of language)	Brainstorming Categorizing Paraphrasing Consensus Prior Knowledge
"	"		Application Visual Learning Style Association	Grouping/Categorizing Brainstorming Applying a definition
"	"		Association	Learning to learn (own method of retention) (using learning style) Application of PK (MMC Definition)
"	"		Diameter/Radius Reading Symbols Translating symbols into writing (transpose, paraphrase)	Comparison/Contrast Problem Solving

		LITERACY OBJECTIVES		
TEACHER	**CLASS**	**DATE**	**SKILLS**	**PROCESSES**
Mary Wurst	**LEWISystems**	8/10/93 a.m.	Teaching metacognition (theory behind learning to learn)	
"	"	8/10/93 p.m.	Teaching metacognition (theory behind learning to learn)	
"	"	8/10/93		Brainstorming Comparison & Contrast Cause/Effect
"	"	8/10/93 a.m.	Activating prior knowledge Pre-reading a text Note taking Categorizing Decision making (re-finding important information)	Metacognition (awareness of learning styles) Brainstorming

		LITERACY OBJECTIVES		
TEACHER	**CLASS**	**DATE**	**SKILLS**	**PROCESSES**
Mary Wurst	**Grimes-Twain Ave.**		Teaching metacognition (theory behind learning to learn)	
"	"		Association Divergent/Convergent Thinking	Using brainstorming - making connections
"	"		Sequencing Group Consensus/Discussion	Decision making Sequencing
"	"		Comparison/Contrast Computation using written direct formulas Decoding	Metacognition Brainstorming

		LITERACY OBJECTIVES		
TEACHER	**CLASS**	**DATE**	**SKILLS**	**PROCESSES**
Mary Wurst	**The Hall Company**		Teaching metacognition (theory behind learning to learn)	
"	"		Teaching metacognition (theory behind learning to learn)	
"	"		Clear written objectives	Sequencing Problem Solving Analyzing

(7)

Workplace Reading Bibliography
Dr. Johanna S. DeStefano
Language and Literacy Education

Adult Learning, 3, 8, (June 1992) - Issue on Workplace Literacy

Blanton, William E., & Moorman, Gary B. (November, 1990) The Information Text Reading Activity (ITRA): Engaging students in meaningful learning. Journal of Reading, 34:3, pp. 174-183.

Kazemek, F.E. (1989). Whole language and adult literacy education, Information Update, 6, 2, pp. 3-6.

Lehman, B.A., Johnson, L.G. & Lehman, D.W. (1992). Whole language for adult literacy, Adult Learning, 3, 5, pp. 15-16, 23.

Lewis, J. (1991). Fostering thinking across the curriculum through knowledge restructuring, Journal of Reading, 34, 6, pp. 420-423.

McBeth, S. (1989). Creating curriculum: A learner-centered approach. In Taylor, Mc.C. & J.A. Draper (eds.), Adult literacy perspectives, pp. 145-153. Toronto: Culture Concepts.

Philippi, J.W. (1989). Developing Instruction for Workforce Literacy Programs. Springfield, VA: Performance Plus Literacy Consultants.

Philippi, J. (1991). Literacy at Work: the Workbook for Program Developers.

Proper, Len (April, 1992) Train Ohio's Workforce: Workplace Literacy: A Selected Bibliography. Ohio Bureau of Employment Services.

Reynolds, Ralph E., and Wade, Suzanne, E. (October, 1989) Developing metacognitive awareness. Journal of Reading, pp. 6-14.

Rena Soifer; Martha Irwin; Barbara Crumrine; Emo Honzaki; Blair Simmons; & Deborah Young. (1990) The Complete Theory-To-Practice Handbook of Adult Literacy. Curriculum Design and Teaching Approaches. New York Teacher College Press, NY, pp. 232.

RECOMMENDATIONS FOR LITERACY LEARNING

- Help students realize how familiar with print they already are.
- Use discussion to link sight-words with student interests.
- Encourage students to work with partners or in small groups based on shared interests, not on ability level.
- Model fluent reading for students when it seems appropriate.
- In one-to-one sessions, encourage students to read along with you as you read aloud (if they are unable to read with fluency).
- Use books on tape from the library and produce personalized tapes for students.
- Use cloze materials (passages with words replaced by blanks so readers can predict what would make sense with the rest of the passage) to reinforce the use of syntactic, semantic, and experiential aids in making meaning.
- Motivate students by discussing their reasons for wanting to learn to read.
- Invite students to bring their own reading material, and do not reject anything on the grounds that it is too hard or too easy.
- Trust students to find their own level. Encourage them to use everything available to help them read.
- Make learning "safe."
- Place learners in charge of their own learning.

SOURCE: *Adult Literacy Contexts & Challenges*, by Anabel Powell Newman & Caroline Beverstock.

Recommended Reading List

Training

Carr, Clay. Smart Training: The Manager's Guide to Training for Improved Performance. McGraw-Hill.

Cook, James R. and Carol M. Panza. "ROI: What Should Training Take Credit For?" Training. Jan 1987: 59-68.

Georgenson, Dave and Edward Del Gaizo. "Maximize the Return on Your Training Investment through Needs Analysis." Training and Development Journal. Aug 1984: 42-47.

Godkewitsch, Michael. "The Dollars and Sense of Corporate Training" Training. May 1989: 79-81.

Gordon, Jack. "Romancing the Bottom Line." Training. June 1987: 31-42.

Kearsley, Greg. Costs, Benefits, and Productivity in Training Systems. Addison. 1982.

Nilson, Carolyn. How to Manage Training: A Guide to Administration, Design, and Delivery. American Management Association.

Phillips, Jack J. Handbook of Training Evaluation and Measurement Methods. 2nd Ed. Houston: Gulf, 1991.

Rossett, Allison. "Assess for Success." Training and Development Journal. May 1989: 55-9.

Senge, Peter M. The Fifth Discipline: The Art and Practice of the Learning Organization. Currency-Doubleday, 1990.

Senge, Peter M., Charlotte Roberts, Richard B. Ross, Bryan J. Smith and Art Kleiner. The Fifth Discipline Fieldbook: Strategies and Tools for Building a Learning Organization. Currency-Doubleday, 1994.

Sheppeck, Michael A., and Stephen L. Cohen. "Put a Dollar Value on Your Training Programs." Training and Development Journal. Nov 1985: 59-62.

Silberman, Mel, and Carol Auerbach. Active Training: A Handbook of Techniques, Designs, Case Examples and Tips. Lexington-Heath.

Supplement to the Training and Development Journal, July 1990: S1-S32.

Tracey, William R. Designing Training and Development Systems. 3rd ed. New York: American Management Association, 1992.

Wick, Calhoun W. and Lu Stanton Leon. The Learning Edge: How Smart Managers and Smart Companies Stay Ahead.

Teams/Management

Berry, Thomas. Managing the Total Quality Transformation. McGraw, 1991.

Covey, Stephen. The 7 Habits of Highly Effective People. Simon, 1990.

Dauziel, Murray M. and Stephen C. Schoonover. Changing Ways: A Practical Tool for Implementing Change Within Organizations. American Management Association, 1987.

O'Grady, Dennis E. Taking the Fear Out of Changing: Guidelines for getting through tough life transitions. Dayton: New Insights, 1992.

Parker, Glenn M. Team Players and Teamwork: The New Competitive Business Strategy. Jossey-Bass.

Sashkin, Marshall and Kenneth J. Kiser. Putting Total Quality Management to Work: What TQM Means, How to Use It & How to Sustain It Over the Long Run. Berrett-Koehler.

Stech, Ernest and Sharon A. Ratliffe. Working in Groups: A Communicaiton Manual for Leaders and Participants in Task-Oriented Groups.

Walton, Mary. Deming at Work.

Wellins, Richard., William C. Byham, and Jeanne M. Wilson. Empowered Teams: Creating Self-Directed Work Groups that Improve Quality, Productivity, and Participation. Jossey-Bass.

Thinking

Adams, James L. The Care and Feeding of Ideas: A Guide to Encouraging Creativity. Addison-Wesley.

Agor, Weston, H. Intuitive Management: Integrating Left and Right Brain Management Skills. Prentice-Hall.

Corrigan, Dorothy D. The Brain Game: Exploring and Activating Your Body's Most Creative Organ. Beaufort.

De bono, Edward. Lateral Thinking: Ceativity Step by Step. New York; Harper, 1970

De bono, Edward. Lateral Thinking for Management: A Handbook of Creativity. England, 1971.

Gross, Ronald. Peak Learning: A Master Course in Learning How to Learn. Los Angeles: Tarcher, 1991.

Harrison, Allen F. and Robert M. Bramson. Styles of Thinking: Strategies for Asking Questions, Making Decisions, and Solving Problems. Anchor-Doubleday, 1982.

Hart, Leslie A. "Brain, Language, and New Concepts of Learning." Educaitonal Leadership. March 1981: 443-45.

Hart, Leslie A. How the Brain Works: A New Understanding of Human Learning, Emotion and Thinking. New York: Basic Books, 1975.

Kirst, Werner and Ulrich Diekmeyer. Creativity Training: Becoming Creative in 30 Minutes a Day.

Le Poncin, Monique. Brain Fitness: A Proven Program to Improve Your Memory, Logic, Attention Span, Organizational Ability and More. Trans. Lowell Bair. Fawcett.

Miller, Paul C. and Tom Gorman. Big League Business Thinking: The Heavy Hitters Guide to Top Management Performance Prentice-Hall, 1994.

Raudsepp, Eugene. More Creative Growth Games: 75 New Mind-Stretching Games to Expand Your Imagination.

Ray, Michael and Rochelle Myers. Creativity in Business. Doubleday, 1986.

Restak, Richard. The Brain has a Mind of Its Won: Insights from a Practicing Neurologist. New York: Harmony, 1991.

Van Gundy, Arthur B. Idea Power: Techniques and Resources to Unleash the Creativity in Your Organization.

Vos Savant, Marilyn and Leonore Fleischer. Brain Building. Bantam.

Wonder, Jacquelyn and Pricilla Donovan. Whole Brain Thinking: Working from Both Sides of the Brain. New York: Quill-Morrow, 1984.

Assessment

Student Assessment

As noted in the body of this text, standardized and customized assesments were used to track student progress. TALS tests were used to assess basic skill levels before and after training. Johanna Destefano's GAP reading comprehension test was administered. The Job Skills Inventory was periodically given to assess student understanding of work processes as well as thinking and communication processes. The JSI also reveals the level of skill application and transfer to the job. The Lifelong Learning Log, used in two forms, monitored skill application and transfer achieved by students in terms of personal learning, life skills, etc. and to plan for future learning challenges. In addition to these formal assessment tools, students and teachers assessed individual and group progress on a class-by-class basis by leaving time at the close of each class to discuss the day's topic, its applicaiton to the work site and the degree of confidence achieved.

Johanna DeStefano, believing that learners reading comprehension of text is situated enough so that the typical reading comprehension instruments don't fit a workplace context well, devised two instruments which she titled GAP. Text from the workplaces, a selection from a Grimes manual and one from an SPC manual that could be used with the three other companies, were analyzed via cohesion analysis. DeStefano determined the topics in a given text and the words which carry the topic throughout the text. When the topic chains were identified, several works in each chain were deleted, leaving blanks in the text. This instrument creation is completely different from the cloze which is created by deleting every nth word, no matter what the word is. In a GAP, many fewer words are deleted, and they are selected from topic chains which are coherent.

DeStefano's GAP tests comprehension by assessing their ability to keep up with the topic chains which must be followed to comprehend the text. Readers are asked to fill GAP blanks with the word they think is missing. Once all the blanks are filled in, DeStefano analyzes the person's choice and contrasts it with the word in the actual text, if they differ. Further analysis is performed on the person's choice, determining if the word is: in the same semantic field as word in the text; same word but different syntactic form; not in field but sensible; not in field and not sensible.

The GAP results for Grimes employee #4538 is attached. You can see that out of 15 blanks, this person selected the same word as the text in 6 instances. In 9, s/he did not. What do their choices tell us about their comprehension? Notice that two selections, both "measurements," are in the same field as "heights," but are super ordinate terms. In other words, height is a form of measurement. The teacher can discuss the topic chain with the learner and determine the level of understanding by asking specific questions. It is important to ask questions about why the employee selected "measurement" instead of "height." Another choice was in the same field also: "coding" for "zero" which could be super ordinate in that zero could be considered a form of coding in this selection.

Two other choices were sensible, although not in the same semantic field as the wording the text. It's possible that "rounding" is considered by the reader to be a form of coding, as with "numbers" for "average." These choices should be discussed with the reader to enable both to understand what the reasoning is behind the choice. DeStefano has found in previous use of GAPs that readers can offer reasons for their choices, which are sometimes more revealing than the choices themselves.

This particular person made four word choices which were neither sensible, considering the context of the text, nor in the same semantic field as the text word. For example, the last word was "total," only a part of what is needed to determine an "average," the word in the text. In conjunction with other clues found in this GAP, this employee may indeed be having difficulty following the topic chain. The response could also indicate that the reader doesn't know what an average is, or it's mathematical significance. All of these possibilities should be discussed with the employee and considered when planning curriculum content.

The GAP instrument reveals much about the understanding employees have of workplace text of any kind, which is critical in training. The GAP instrument enables both learner and teacher to better understand reading comprehension of actual materials used in the workplace. Standardized tests, on the other hand, have little to do with the workplace and may draw on comprehension skills of an entirely different type such as academic or life skills.

Teacher Assessment

Assessment for teacher excellence began almost before training ended. Teacher readiness was assessed at the end of each training session and teacher training was amended and reworked as needed. Teachers were asked to use metacognitive skills in assessing their own learning and teaching styles. By beginning teacher assessment during teacher training, the stage was set for team learning, team teaching and continued growth.

Teachers spent time at the end of each class reviewing their process and student progress. During the final minutes of each class, teachers led discussions concerning curriculum progress, skill transfer and future needs. In reviewing closing remarks, teachers were given direct feedback from students concerning teaching methods and the degree to which the teacher reached students and met their needs. Grant administrative and support personnel were available for consultation on problems and concerns.

Organized review of teaching methods and progress occurred during scheduled on-going teacher training. The Workplace Training Team held group assessments based on summaries of class progress. Analysis and improvement were the main topics of the on-going training sessions. Grant administrative offered assistance and sought additional resources when necessary. Teachers were encouraged to share their lessons, successes and failures with each other to shorten the learning curve.

Formal teacher assessment occurred in the form of cognitive coaching. Grant administrators asked teachers to record their vision of a specific lesson, including its goal, the methods, expected results, assessment methods, and the thinking behind the lesson. Administrators subsequently visited classes and observed teachers executing the recorded lesson. A consultation was then held to discuss the lesson. Teachers were asked to assess how well they met their goals and the appropriateness of the lesson, its methods, assessment criteria, etc. The administrative observer guided teachers through the process in order to develop a clear understanding of lesson successes and failures as well as uncover possible improvements.

Teacher Assessment
Cognitive Coaching

Cognitive Coaching was chosen as the teacher assessment tool due to its emphasis on improvement through self-determination and awareness and continuous improvement. This method models the continuous improvement theme of the project. According to Robert Garmston in Reflections on Cognitive Coaching," Cognitive Coaching uses a three-phase cycle similar to teacher evaluation through clinical supervision: pre conference, observation and post conference. The primary difference between Cognitive Coaching and evaluation is that Cognitive Coaching uses these cycles for the sole purpose of helping the teacher improve instructional effectiveness by becoming more reflective about teaching. While the pre conference requires a teacher to articulate the day's goals and the post conference calls for assessment, the teacher, not the coach, evaluates the lesson's success."

Questions were developed for pre and post interviews between the coach and the teacher. The coach recorded classroom events as directed by the teacher during the pre-interview. At the post interview, information and observations were shared and new goals set. Cognitive coaching allows the teacher/facilitator great control over the assessment process. The facilitators had been trained to manage their classroom is a manner similar to Cognitive Coaching in that students participate in selecting the direction of training and are greatly responsible for the results.

The facilitators and coaches reported that they enjoyed the assessment process and received personal benefits. The coaches were challenged to ask questions that led the facilitators to analyze their teaching techniques and to discover methods of offering suggestions and additional information without taking control and responsibility for the process. This team approach was a continuation of the team/continuous improvement methods applied throughout the grant.

COGNITIVE COACHING PROCESS
Pre-Conference

Interviewee Elizabeth Spievak Title Project Teacher

Interviewer Johanna DeStefano Title Project Consultant

Pre-Conference Date 6/14/94

Step One Set date for observation and post-conference (identify the class)

Date 7/11/94 Class Russell St. Supervisors' class

Step Two Pre interview

• What are your objectives?

1. Students Have Knowledge of workers' own view classes – as they supervise workers.
2. Have students take organizational info., apply to Games, and manage time, learning style & thinking style, change disseminate throughout plant or to others – projects

students set goals

•How will you know when you've reached your objectives?

1. By student reactions - Stay after class, comments made – discussion points, feedback of all types
2. Won't know as doesn't intend to check with boss. JSD – Report on diss. activities; ES – make a dissemination plan & report back.

•What is your plan?

1. & 2. See class plans – all scoped out. Students have them too – schedule, etc. (1st time)

•On what other aspects of your teaching do you want information?

Qualitative/Quantitative Afraid of student evaluation – because partly not trained/educated in basic skills. Doesn't even like basic skills teaching. Wants to get positive

Other feedback.

GAP Interpretation

Many, but person could have some real comprehension probs.

GRIMES

Number 4538

	Word in Text:	Person's Choice	
1.	measurements	measurements	same word
2.	measurements	number (s?)	same semantic field, superordinate term,
3.	numbers	number (s?)	same word
4.	coding	coding	same word
5.	heights	measurements	same field, superordinate term
6.	coding	rounding	sensible maybe but not in field
7.	it	measurement	not in field, not sensible (?)
8.	zero	coding	sensible - in field possibly sysord. to
9.	five (5)	5	same word
10.	numbers	number	same word
11.	average	numbers	sensible (?) but not in field
12.	readings	base	not in field + not sensible
13.	base	base	same word
14.	code	divide	not in field + not sensible
15.	average	total	" "

Same word - 6
Different Wnd - 9 — 3 in same field 2
2 sensible (?) + not in field 2
4 not sensible + not in field 4

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